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EXAMINER

RILEY, MARCUS T

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/787,361

Applicant(s)

MACHIDA ET AL.

Examiner

Marcus T. Riley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/27/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>attached</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 1, 2, 6-11 and 18** are objected to because of the following informalities:

Regarding claim 1; claim 1 states in part “...*the image forming apparatus comprising encryption and decryption...*” This appears to be a typographical error and it is assumed for continued examination purposes that a colon is intended to be after the word “*comprising*”. Thus, it should read “...*the image forming apparatus comprising: encryption and decryption...*”

Regarding claim 2; claim 2 states in part “...*temporary storage unit therewithin when...*” This appears to be a typographical error and it is assumed for continued examination purposes that a space is intended to be between the words “*there*” and “*within*”. Thus, it should read “...*temporary storage unit there within when...*”

Furthermore; claim 2 reads in part “...*when the image data is stored onto the image storage means and/or when the encrypted image data is read from the image storage means...*” It is assumed for continued examination purposes that the “*and/or*” is intended to be and “*or*”. ...” Suggest changing the “*and/or*” to “*or*”. Thus, it should read “...*when the image data is stored onto the image storage means or when the encrypted image data is read from the image storage means...*”

Regarding claims 6-11; claims 6-11 reads in part “*compressing and/or decompressing*”. It is assumed for continued examination purposes that the “*and/or*” is intended to be and “*or*”. Suggest changing the “*and/or*” to “*or*”. Thus, it should read “...*compressing or decompressing...*”

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Regarding claim 18; claim 18 reads in part “...*the setting of an0 encryption key...*” This appears to be a typographical error and it is assumed for continued examination purposes that the “an0” is intended to be “an”. Suggest deleting the “0”. Thus, it should read “...the setting of an encryption key...”

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being anticipated by Kurihara (US 6,850,716 B2 hereinafter, Kurihara ‘716).

Regarding claim 1; Kurihara '716 discloses an image forming apparatus for forming an image based on input image data, the image forming apparatus comprising: encryption and decryption means that encrypts image data using an encryption key prior to the storage of the input image data onto image storage means, and decrypts the encrypted image data subsequent to the reading of the encrypted image data from the image storage means (*"Further, it is also possible to encrypt and store the program of the present invention on a storage medium such as a CD-ROM, distribute the storage medium to users, allow users who meet certain requirements to download decryption key information from, e.g., a website via the Internet, and allow these users to run the encrypted program by using the key information, whereby the program is installed in the user computer."* column 10, lines 33-39).

Regarding claim 2; Kurihara '716 discloses a non-volatile storage means for storing the encryption key, wherein the encryption and decryption means temporarily stores the encryption key, sent from the non-volatile storage means, in a temporary storage unit there within when the image data is stored onto the image storage means or when the encrypted image data is read from the image storage means (*"An environment configuring memory 11 comprising a non-volatile read/write memory (referred to as an "NVRAM" below) saves various operating environment settings of the image forming apparatus 30. column 2, lines 27-30). See also ("Further, it is also possible to encrypt and store the program of the present invention on a storage medium such as a CD-ROM, distribute the storage medium to users, allow users who meet certain requirements to download decryption key information from, e.g., a website via the Internet, and allow these users to run the encrypted program by using the key information, whereby the program is installed in the user computer."* column 10, lines 33-39).

Regarding claim 3; Kurihara '716 discloses where the encryption and decryption means and the non-volatile storage means are arranged in separate units (*"Further, it is also possible to encrypt and store the program of the present invention on a storage medium such as a CD-ROM, distribute the storage medium to users, allow users who meet certain requirements to download decryption key information from, e.g., a website via the Internet, and allow these users to run the encrypted program by using the key information, whereby the program is installed in the user computer."* column 10, lines 33-39).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurihara '716 in combination with Lee et al. (US 5,606,613 hereinafter, Lee '613).

Regarding claim 4; Kurihara '716 discloses an image forming apparatus for forming an image based on input image data, the image forming apparatus comprising encryption and decryption means that encrypts image data using an encryption key prior to the storage of the input image data onto image storage means, and decrypts the encrypted image data subsequent to the reading of the encrypted image data from the image storage means (*"Further, it is also possible to encrypt and store the program of the present invention on a storage medium such as*

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a CD-ROM, distribute the storage medium to users, allow users who meet certain requirements to download decryption key information from, e.g., a website via the Internet, and allow these users to run the encrypted program by using the key information, whereby the program is installed in the user computer.” column 10, lines 33-39).

Kurihara ‘716 does not expressly disclose an encryption key generating means for generating a random number and producing the encryption key that contains at least a portion of the generated random number.

Lee ‘613 discloses an encryption key generating means for generating a random number and producing the encryption key that contains at least a portion of the generated random number (“In operation, upon power-up of the system or at such other selected times, the verification circuit in response to a power-up print command (Print Cmmd) from the meter 10 outputs a random number message to the decryption/encryption engine 37 which encrypts the message in response to the power-up print command. The encrypted message is sent out to the meter. The encryption/decryption engine 37 of the vault decrypts the message in response to the print command.” column 3, lines 61-67 thru column 4, lines 1-2).

Kurihara ‘716 and Lee ‘613 are combinable because they are from same field of endeavor of an image forming apparatus (“The present invention relates to a postage metering system using digital printing...” Lee ‘613 at column 1, lines 6-7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Kurihara ‘716 by adding an encryption key generating means for generating a random number and producing the encryption key that contains at least a portion of the generated random number as taught by Lee ‘613.

The motivation for doing so would have been in order to assure full and accurate accounting of the printer (*"In order to assure full and accurate accounting for the particular digital printer, upon power-up of the system or at such other pre-selected condition, the print controller module of the digital printer sends out an encrypted message to the meter."* Lee '613 at column 2, lines 14-19).

Therefore, it would have been obvious to combine Kurihara '716 with Lee '613 to obtain the invention as specified in claim 1.

Regarding claim 5; Lee '613 discloses The image forming apparatus according to claim 2, further comprising encryption key generating means for generating a random number and producing the encryption key that contains at least a portion of the generated random number (*"In operation, upon power-up of the system or at such other selected times, the verification circuit in response to a power-up print command (Print Cmmd) from the meter 10 outputs a random number message to the decryption/encryption engine 37 which encrypts the message in response to the power-up print command. The encrypted message is sent out to the meter. The encryption/decryption engine 37 of the vault decrypts the message in response to the print command."* column 3, lines 61-67 thru column 4, lines 1-2).

6. **Claims 6-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurihara '716 in combination with Lee '613 as applied to claim 1 above, and further in view of Ronning (US 5,903,647 hereinafter, Ronning '647).

Regarding claim 6; Kurihara '716 in combination with Lee '613 does not expressly disclose an encryption key compression and decompression means for compressing or decompressing the encryption key using a predetermined compression and decompression

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method, wherein the compressed encryption key is stored onto the non-volatile storage means and when the encryption key is used, the compressed encryption key is read from the non-volatile storage means.

Ronning '647 discloses an encryption key compression and decompression means for compressing or decompressing the encryption key using a predetermined compression and decompression method, wherein the compressed encryption key is stored onto the non-volatile storage means and when the encryption key is used, the compressed encryption key is read from the non-volatile storage means (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25). See also (*"An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium."* column 6, lines 14-18).

Kurihara '716 and Lee '613 are combinable with Ronning '647 because they are from same field of endeavor of an image forming apparatus (*"The system typically uses an image driver 56..."* Ronning '647 at column 5, lines 19-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Kurihara '716 and Lee '613 by adding an encryption key compression and decompression means for compressing or decompressing the encryption key using a predetermined compression and decompression method, wherein the compressed encryption key is stored onto the non-volatile storage means

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and when the encryption key is used, the compressed encryption key is read from the non-volatile storage means as taught by Ronning '647.

The motivation for doing so would have been in order to prevent unauthorized copying of the software program or other digital information ("*...in order to prevent unauthorized copying of the software program or other digital information.*" Ronning '647 at column 2, lines 20-23).

Therefore, it would have been obvious to combine Kurihara '716 and Lee '613 with Ronning '647 to obtain the invention as specified in claim 1.

Regarding claim 7; Ronning '647 discloses an encryption key compression and decompression means for compressing or decompressing the encryption key using a predetermined compression and decompression method, wherein the compressed encryption key is stored onto the non-volatile storage means and when the encryption key is used, the compressed encryption key is read from the non-volatile storage means ("*The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them.*" column 8, lines 21-25). See also ("*An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium.*" column 6, lines 14-18).

Regarding claim 8; Ronning '647 discloses an encryption key compression and decompression means for compressing or decompressing the encryption key using a predetermined compression and decompression method, wherein the compressed encryption key is stored onto the non-volatile storage means and when the encryption key is used, the

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compressed encryption key is read from the non-volatile storage means (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25). See also (*"An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium."* column 6, lines 14-18).

Regarding claim 9; Ronning '647 discloses an where the encryption key compression and decompression means applies an image compression and decompression unit for compressing or decompressing the image data (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25).

Regarding claim 10; Ronning '647 discloses an where the encryption key compression and decompression means applies an image compression and decompression unit for compressing or decompressing the image data (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25).

Regarding claim 11; Ronning '647 discloses an where the encryption key compression and decompression means applies an image compression and decompression unit for

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compressing or decompressing the image data (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25).

7. **Claims 12 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (US 6,058,476 hereinafter, Matsuzaki '476) in combination with Ronning '647.

Regarding claim 12; Matsuzaki '476 discloses an image forming apparatus for forming an image based on input image data, the image forming apparatus comprising: input means for capturing a key value of an encryption key input by a user during the setting of the encryption key (*"In FIG. 3 step (11), the E function 67 uses data transfer key K stored in data transfer key K storage unit 70 to encrypt digital copyrighted material inputted through external I/F unit 61 and switch 65. The result Cj is outputted to second device 52 through switch 68 and external I/F unit 61."* column 15, lines 3-7); key value determining means for determining whether key values input by the user by a predetermined number of times match each other (*"First device 11 compares the decryption result RR1 with the random number R1 temporarily stored inside first device 11. If they match, first device 11 considers second device 12 to be in possession of the same authentication key S, and confirms the entity in communication as a legitimate device. However if they do not match, then it judges the entity in communication an unauthorized device and terminates the process."* column 2, lines 49-56).

Matsuzaki '476 does not expressly disclose a non-volatile storage means for storing the key value input as an encryption key if the key value determining means determines that the key values match each other or encryption and decryption means for encrypting the image data using

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an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to the reading of the encrypted image data from the image storage means.

Ronning '647 discloses a non-volatile storage means for storing the key value input as an encryption key if the key value determining means determines that the key values match each other (*"The system then determines if the loaded image matches the database image (196) for security purposes. If the image does not match, the database data is rectified to that of the image (198) and the virtual volume is closed and unmounted (194) in order to maintain the application in a locked state."* column 9, lines 5-9). See also (*"An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium."* column 6, lines 14-18); and encryption and decryption means for encrypting the image data using an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to the reading of the encrypted image data from the image storage means (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25).

Matsuzaki '476 and Ronning '647 are combinable because they are from same field of endeavor of an image forming apparatus (*"The system typically uses an image driver 56..."* Ronning '647 at column 5, lines 19-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476 by adding a non-

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volatile storage means for storing the key value input as an encryption key if the key value determining means determines that the key values match each other or encryption and decryption means for encrypting the image data using an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to the reading of the encrypted image data from the image storage means as taught by Ronning '647.

The motivation for doing so would have been in order to prevent unauthorized copying of the software program or other digital information ("*...in order to prevent unauthorized copying of the software program or other digital information.*" Ronning '647 at column 2, lines 20-23).

Therefore, it would have been obvious to combine Matsuzaki '476 with Ronning '647 to obtain the invention as specified in claim 12.

Regarding claim 18; Matsuzaki '476 discloses a method for inputting the setting of an encryption key for use in the encryption of image data, the encryption key being used to store input image data in image storage means, the method comprising the steps of: capturing key values of the encryption key input by a user ("*In FIG. 3 step (11), the E function 67 uses data transfer key K stored in data transfer key K storage unit 70 to encrypt digital copyrighted material inputted through external I/F unit 61 and switch 65. The result Cj is outputted to second device 52 through switch 68 and external I/F unit 61.*" column 15, lines 3-7); determining whether the key values input by the user by a predetermined number of times match each other ("*First device 11 compares the decryption result RR1 with the random number R1 temporarily stored inside first device 11. If they match, first device 11 considers second device 12 to be in possession of the same authentication key S, and confirms the entity in communication as a*

legitimate device. However if they do not match, then it judges the entity in communication an unauthorized device and terminates the process." column 2, lines 49-56).

Matsuzaki '476 does not expressly disclose storing, in non-volatile storage means, the input key value as the encryption key when the key values match each other in the key value determining step.

Ronning '647 discloses storing, in non-volatile storage means, the input key value as the encryption key when the key values match each other in the key value determining step (*"The system then determines if the loaded image matches the database image (196) for security purposes. If the image does not match, the database data is rectified to that of the image (198) and the virtual volume is closed and unmounted (194) in order to maintain the application in a locked state."* column 9, lines 5-9). See also (*"An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium."* column 6, lines 14-18).

Matsuzaki '476 and Ronning '647 are combinable because they are from same field of endeavor of an image forming apparatus (*"The system typically uses an image driver 56..."* Ronning '647 at column 5, lines 19-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476 by adding storing, in non-volatile storage means, the input key value as the encryption key when the key values match each other in the key value determining step as taught by Ronning '647.

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The motivation for doing so would have been in order to prevent unauthorized copying of the software program or other digital information ("*...in order to prevent unauthorized copying of the software program or other digital information.*" Ronning '647 at column 2, lines 20-23).

Therefore, it would have been obvious to combine Matsuzaki '476 with Ronning '647 to obtain the invention as specified in claim 18.

8. **Claims 13-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki '476 in combination with Ronning '647 as applied to claims 12 and 13 above, and further in view of Ote et al. (US 6,023,506 hereinafter, Ote '506).

Regarding claim 13; Matsuzaki '476 in combination with Ronning '647 does not expressly disclose display means for displaying the key value captured by the input means, and converting an input key value into a form having no specific meaning.

Ote '506 discloses display means for displaying the key value captured by the input means, and converting an input key value into a form having no specific meaning ("*...and displays a list of encrypted files 1090 stored in the encrypted file area 1080 in the form of unencrypted file name.*" column 6, lines 9-12).

Matsuzaki '476 and Ronning '647 are combinable with Ote '506 because they are from same field of endeavor of an image forming apparatus ("*The user interface in an embodiment in which the present invention is applied to the operating system "MS-Windows" will now be described by using diagrams showing concrete images of the screen.*" Ote '506 at column 13, lines 38-41).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by the combination of Matsuzaki '476

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and Ronning '647 by adding display means for displaying the key value captured by the input means, and converting an input key value into a form having no specific meaning as taught by Ote '506.

The motivation for doing so would have been to make it possible to encrypt files by effecting a simple manipulation ("*...and which makes it possible to encrypt files by effecting a simple manipulation...*" Ote '506 at column 2, lines 3-4).

Therefore, it would have been obvious to combine Matsuzaki '476 and Ronning '647 with Ote '506 to obtain the invention as specified in claim 12.

Regarding claim 19; Matsuzaki '476 in combination with Ronning '647 does not expressly disclose a step for displaying the key value captured in the capturing step, and for converting an already input key value into a form having no specific meaning.

Ote '506 discloses a step for displaying the key value captured in the capturing step, and for converting an already input key value into a form having no specific meaning ("*...and displays a list of encrypted files 1090 stored in the encrypted file area 1080 in the form of unencrypted file name.*" column 6, lines 9-12).

Matsuzaki '476 and Ronning '647 are combinable with Ote '506 because they are from same field of endeavor of an image forming apparatus ("*The user interface in an embodiment in which the present invention is applied to the operating system "MS-Windows" will now be described by using diagrams showing concrete images of the screen.*" Ote '506 at column 13, lines 38-41).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by the combination of Matsuzaki '476

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and Ronning '647 by adding a step for displaying the key value captured in the capturing step, and for converting an already input key value into a form having no specific meaning as taught by Ote '506.

The motivation for doing so would have been to make it possible to encrypt files by effecting a simple manipulation ("*...and which makes it possible to encrypt files by effecting a simple manipulation...*" Ote '506 at column 2, lines 3-4).

Therefore, it would have been obvious to combine Matsuzaki '476 and Ronning '647 with Ote '506 to obtain the invention as specified in claim 18.

9. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki '476, Ronning '647 and Ote '506 as applied to claim 12 above, and further in view of Kobayashi et al. (US 7,124,094 hereinafter, Kobayashi '094).

Regarding claim 14; Matsuzaki '476, Ronning '647 and Ote '506 does not expressly disclose where the display means divides the key value of M digits on an N digits by N digits basis (M being greater than N), and converts a part of the key value of the N digits into a form having no specific meaning as soon as the inputting of the key value of the part of the N digits is completed.

Kobayashi '094 discloses where the display means divides the key value of M digits on an N digits by N digits basis (M being greater than N), and converts a part of the key value of the N digits into a form having no specific meaning as soon as the inputting of the key value of the part of the N digits is completed ("*The data server 10 divides text data into plural parts in accordance with image memory sizes, wherein, memory overflow can be prevented by transmitting the succeeding part when printing for one preceding part is completed, or when it is*

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confirmed, even in the course of printing, that sufficient unoccupied capacity is secured for image memory, which is preferable." column 18, lines 41-47).

Matsuzaki '476, Ronning '647 and Ote '506 are combinable with Kobayashi '094 because they are from same field of endeavor of an image forming apparatus ("*The present invention relates to a printing apparatus which conducts printing based on data expressing images...*" Kobayashi '094 at column 1, lines 7-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476, Ronning '647 and Ote '506 by adding where the display means divides the key value of M digits on an N digits by N digits basis (M being greater than N), and converts a part of the key value of the N digits into a form having no specific meaning as soon as the inputting of the key value of the part of the N digits is completed as taught by Kobayashi '094.

The motivation for doing so would have been to prevent printing failure and delay ("*... to provide a print system which prevents that printing failure and delay...*" Kobayashi '094 at column 2, lines 25-27).

Therefore, it would have been obvious to combine Matsuzaki '476, Ronning '647 and Ote '506 with Kobayashi '094 to obtain the invention as specified in claim 12.

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki '476 and Ronning '647 as applied to claim 12 above, and further in view of Ashizaki et al. (US 7,024,500 hereinafter, Ashizaki '500).

Regarding claim 15; Matsuzaki '476 and Ronning '647 does not expressly disclose where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format.

Ashizaki '500 discloses where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format (*"As shown in FIGS. 9 to 12, the print data specifying information is identified by a hexadecimal value of the name of an image format."* column 15, lines 4-6).

Matsuzaki '476 and Ronning '647 are combinable with Ashizaki '500 because they are from same field of endeavor of an image forming apparatus (*"The present invention relates to a... printing apparatus..."* Ashizaki '500 at column 1, lines 12-13).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476 and Ronning '647 by adding where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format as taught by Ashizaki '500.

The motivation for doing so would have been in order to make a printing work by the use of the print data supplied from the printing control unit via the second input/output means (*"...for making a printing work by the use of the print data supplied from the printing control unit via the second input/output means."* Ashizaki '500 at column 5, line 1-2).

Therefore, it would have been obvious to combine Matsuzaki '476 and Ronning '647 with Ashizaki '500 to obtain the invention as specified in claim 12.

Art Unit: 2625

11. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki '476, Ronning '647 and Ote '506 as applied to claim 12 above, and further in view of Ashizaki '500.

Regarding claim 16; Matsuzaki '476, Ronning '647 and Ote '506 does not expressly disclose where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format.

Ashizaki '500 discloses where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format (*"As shown in FIGS. 9 to 12, the print data specifying information is identified by a hexadecimal value of the name of an image format."* column 15, lines 4-6).

Matsuzaki '476, Ronning '647 and Ote '506 are combinable with Ashizaki '500 because they are from same field of endeavor of an image forming apparatus (*"The present invention relates to a... printing apparatus..."* Ashizaki '500 at column 1, lines 12-13).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476, Ronning '647 and Ote '506 by adding where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format as taught by Ashizaki '500.

The motivation for doing so would have been in order to make a printing work by the use of the print data supplied from the printing control unit via the second input/output means (*"...for making a printing work by the use of the print data supplied from the printing control unit via the second input/output means."* Ashizaki '500 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Matsuzaki '476, Ronning '647 and Ote '506 with Ashizaki '500 to obtain the invention as specified in claim 12.

Art Unit: 2625

12. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki '476, Ronning '647, Ote '506 and Kobayashi '094 as applied to claim 12 above, and further in view of Ashizaki '500.

Regarding claim 17; Matsuzaki '476, Ronning '647, Ote '506 and Kobayashi '094 does not expressly disclose where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format.

Ashizaki '500 discloses where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format (*"As shown in FIGS. 9 to 12, the print data specifying information is identified by a hexadecimal value of the name of an image format."* column 15, lines 4-6).

Matsuzaki '476, Ronning '647, Ote '506 and Kobayashi '094 are combinable with Ashizaki '500 because they are from same field of endeavor of an image forming apparatus (*"The present invention relates to a... printing apparatus..."* Ashizaki '500 at column 1, lines 12-13).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Matsuzaki '476, Ronning '647, Ote '506 and Kobayashi '094 by adding where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format as taught by Ashizaki '500.

The motivation for doing so would have been in order to make a printing work by the use of the print data supplied from the printing control unit via the second input/output means (*"...for making a printing work by the use of the print data supplied from the printing control unit via the second input/output means."* Ashizaki '500 at column 5, lines 1-2).

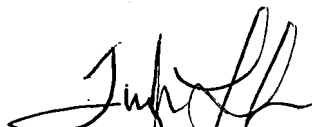
Therefore, it would have been obvious to combine Matsuzaki '476, Ronning '647, Ote '506 and Kobayashi '094 with Ashizaki '500 to obtain the invention as specified in claim 12.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus T. Riley whose telephone number is 571-270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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